ATTACHMENT A

1. (Previously presented): A process for a gas-phase catalytic polymerization of olefins carried out in a plurality of interconnected polymerization zones, the process comprising feeding at least one monomer to said polymerization zones in the presence of a catalyst under reaction conditions and collecting the polymer product from said polymerization zones, wherein polymer particles grow within a first polymerization zone where a fluidized bed is formed, and at least a part of said polymer particles leave said first polymerization zone to enter a second polymerization zone through which they flow downward, leave said second polymerization zone and enter a third polymerization zone through which they flow upward under fast fluidization or transport conditions, leave said third polymerization zone and are reintroduced into the first polymerization zone, thus establishing a circulation of polymer between the different polymerization zones.

2. (Previously presented): The process according to claim 1, wherein the inlet of said second polymerization zone is placed in an upper region of said first polymerization zone below an upper limit of said fluidized bed.

3. (Previously presented): The process according to claim 1, wherein in said second polymerization zone the polymer particles flow downward in a densified form under the action of gravity.

4. (Previously presented): The process according to claim 2, wherein said second polymerization zone is set up inside

a vertical pipe which is coaxial with said first polymerization zone.

5. (Previously presented): The process according to claim 2, wherein said second polymerization zone is set up into a pipe running outside the first polymerization zone, the inlet of said pipe being directly connected to the upper region of said first polymerization zone.

6. (Previously presented): The process according to claim 2, wherein said second polymerization zone is set up into an annular chamber formed between the walls of a fluidized bed reactor and a vessel placed inside and coaxial with said fluidized bed reactor.

7. (Previously presented): The process according to claim 1, wherein the third polymerization zone is set up into a pipe running outside said first polymerization zone.

8. (Previously presented): The process according to claim 1, wherein the polymer particles leaving said third polymerization zone are reintroduced into said first polymerization zone at a point situated above the upper limit of said fluidized bed.

9. (Previously presented): The process according to claim 1, wherein fast fluidization conditions are established in said third polymerization zone by feeding a gas through a line placed at the inlet of said third polymerization zone.

10. (Previously presented): The process according to claim 9, wherein in said third polymerization zone the gas

superficial velocity is between 0.5 and 15 m/s.

11. (Previously presented): The process according to claim 1, wherein a part of polymer particles growing inside said fluidized bed enters directly the third polymerization zone through a pipe connecting the lower region of said fluidized bed to said third polymerization zone.

12. (Previously presented): The process according to claim 1, wherein at least one α-olefin, CH_2=CHR, where R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms, is_polymerized.

13. (Previously presented): The process according to claim 1, wherein a gas mixture present in said first polymerization zone is partially prevented from entering said second polymerization zone by introducing at least one of a gas and a liquid mixture of composition different from the mixture present in the first polymerization zone through at least one introduction line placed in an upper part of said second polymerization zone.

14. (Previously presented): The process according to claim 13, wherein the introduction of at least one of said gas and liquid mixture of different composition establishes a net gas flow upward at an upper limit of the second polymerization zone.

15. (Previously presented): The process according to claim 13, wherein the upper part of said second polymerization zone acts as a stripping column to further remove the volatile components from a gas stream flowing

downward along said second polymerization zone.

16. (Original): The process according to claim 13, wherein a liquid mixture is introduced in the upper part of said second polymerization zone.

17. (Currently Amended): The process according to claim 16, wherein the liquid mixture comprises a hydrogen content ~~the hydrogen content of said liquid mixture decreases as it goes down to the lower sections of said second polymerization zone~~.

18. (Previously presented): The process according to claim 1, wherein a gas mixture present in the second polymerization zone is partially prevented from entering the third polymerization zone by introducing at least one of a gas and a liquid mixture of composition different from the mixture present in the second polymerization zone, through at least one introduction line placed at at least one of the bottom of said second polymerization zone and at the inlet of said third polymerization zone.

19. (Previously presented): An apparatus for a gas-phase polymerization of olefins comprising:

(a) a fluidized bed reactor having a reaction chamber, a distribution plate placed below said reaction chamber, a velocity reduction zone placed above said reaction chamber,

(b) a vertical pipe running inside said reaction chamber, a first end of said vertical pipe protruding from the bottom of the fluidized bed reactor, the other end of said vertical pipe extending up to the higher region of the reaction chamber,

(c) at least one pipe running outside said reactor chamber and connecting the bottom of said vertical pipe to the fluidized bed reactor at a point in the upper portion of said reaction chamber and below said velocity reduction zone.

20. (Original): The apparatus according to claim 19, wherein said vertical pipe is equipped at its top portion with a line for feeding gas or liquid.

21. (Previously presented): The apparatus according to claim 19, wherein said vertical pipe is equipped at its bottom portion with a polymer discharge line and with a line for introducing a gas mixture coming from a recycle line.

22. (Currently Amended): An apparatus for a gas-phase polymerization of olefins comprising:

(a) a fluidized bed reactor having a reaction chamber, a distribution plate placed below said reactor chamber, a velocity reduction zone placed above said reactor chamber,

(b) at least one pipe running outside the fluidized bed reactor and extending downward from an opening in the higher region of the reaction chamber,

(c) at least one pipe connecting the bottom of said at least one downward extending pipe ~~pipes~~ to the fluidized bed reactor at a point in the upper portion of said reaction chamber and below said velocity reduction zone.

23. (Previously presented): The apparatus according to claim 22, wherein said at least one pipe form a loop outside

and around the fluidized bed reactor.

24. (Original): The apparatus according to claim 23, wherein the inlet portion of said loop is equipped with a line for feeding a gas or liquid mixture.

25. (Currently Amended): An apparatus for a gas-phase polymerization of olefins comprising:

(a) a fluidized bed reactor having a reaction chamber, a distribution plate placed below said reaction chamber, a velocity reduction zone placed above said reaction chamber, a vessel placed inside the fluidized bed reactor, coaxially to it, and replicating its shape so to form an annular chamber between its walls and those of the fluidized bed reactor,

wherein the upper end of said vessel extends up to a point in the upper portion of said reaction chamber while the bottom end extends up to a point situated below said velocity reduction zone,

(b) at least one pipe running outside the fluidized bed reactor, said at least one pipe ~~pipes~~ connecting the bottom of said annular chamber to the fluidized bed reactor at a point in the upper portion of said reaction chamber and below said velocity reduction zone.

26. (Previously presented): The apparatus according to claim 25, wherein the annular chamber is equipped at its top portion with at least one line for feeding at least one of a gas and a liquid mixture.

27. (Previously presented): The apparatus according to claim 25, wherein the annular chamber is equipped at its

bottom portion with at least one line for introducing at least one of a gas and a liquid mixture coming from a recycle line.

28. (Previously presented): An apparatus for a gas-phase catalytic polymerization of olefins carried out in a plurality of interconnected polymerization zones, the apparatus comprising:

means for feeding at least one monomer to said polymerization zones in the presence of a catalyst under reaction conditions;

means for collecting the polymer product from said polymerization zones, wherein polymer particles grow within a first polymerization zone where a fluidized bed is formed;

means for moving at least a part of said polymer particles from said first polymerization zone to a second polymerization zone through which they flow downward;

means for moving said polymer particles from said second polymerization zone and to a third polymerization zone through which they flow upward under fast fluidization or transport conditions;

means for moving said polymer particles from said third polymerization zone to the first polymerization zone, thus establishing a circulation of polymer between the different polymerization zones.

29. (New) The process according to claim 17, wherein as the liquid mixture goes down to the lower sections of the second polymerization zone, the hydrogen content of the liquid mixture decreases.